Attorney Docket No. P66602US0 Application No. 09/841,157

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-14 (cancelled)

Claim 15. (new) A method for determining the similarity at the genome level between a target organism and a reference organism comprising the steps of:

- a) preparing one or more of double-stranded DNA fragments by random PER using, as a template, genome DNA of the target organism,
- b) subjecting said double-stranded DNA fragments prepared in step a) to temperature gradient gel electrophoresis (TGGE) or denaturant gradient gel electrophoresis (DGGE), wherein an internal reference double-stranded DNA prepared in advance, of which the melting initiation point and the mobility transition end point are known, is co-migrated with the double-stranded DNA fragments,
- c) assigning each melting initiation point and/or each mobility transition end point of the double-stranded DNA fragments prepared in step a) and both the melting initiation point and the mobility transition end point of the internal reference double-stranded DNA co-migrated from an electrophoretic pattern obtained in step b).
- d) normalizing each coordinate of melting initiation point and/or mobility transition end point of the double-stranded DNA fragments using those of the melting initiation point and mobility